The SKIMMER

News of the Delaware National Estuarine Research Reserve

Volume VIII, No. I
Winter 2003

The Delaware National Estuarine Research Reserve (DNERR) is one of 25 designated reserves across the country.

The program is a federal-state partnership whose goal is to establish, protect and manage natural estuarine habitats for research and education.

Delaware's Reserve consists of two components, the St. Jones River and Blackbird Creek. These sites include both brackish and fresh water estuaries and represent the diverse estuarine ecosystems found throughout the Mid-Atlantic.

Inside

Message from the Reserve Manager

Happy New Year! I am delighted that I have the opportunity to pass on belated holiday greetings and wishes for a peaceful new year.

For those of you new to the Skimmer, my name is Mark Del Vecchio and I am the Manager of DNERR. That is, I was manager until called to active duty in August by the Delaware Army National Guard. I have been serving in Saudi Arabia since September 02 but look forward to coming home in the next few months.

What a great time to be back in Delaware! The spring shorebird migration and horseshoe crab spawning season will be gathering steam as well as many of our school programs. I have stayed in touch with the staff and am looking forward to seeing the progress of all the building projects.

It hasn't been all work and no play here in the Kingdom. For you bird watchers out there, I have seen many interesting and surprisingly colorful bird species. Alas, there are no estuaries nearby and I yearn for the days when I can get back out on open water.

I look forward to returning and being a part of the outstanding programs the DNERR offers. Ma' salaamma (Goodbye).

SGT Mark P. Del Vecchio
" MP's Lead the Way!"

Outreach: Can't bring your class to the St. Jones Reserve? Let us come to you.

If you are looking for an exciting alternative to a field trip at the St. Jones Reserve then let us come to you. The St. Jones Reserve is a component of the Delaware National Estuarine Research Reserve located on Kitts Hummock Road, Dover, Delaware. Programs for grades K-12 are offered to meet the needs of your class. All programs are correlated to the state standards and performance indicators. Programs are free and available upon your request. We can also provide both pre and post activities for specific programs.

Our Introduction to the Estuary provides a slide presentation and age appropriate activities introducing the values and functions of the estuary. Slides present an overview of the pants and animals of the estuary and give an introduction to the reserve and its surrounding property. The instructor will bring live specimens depending on their availability.

If you are all about water, students will learn to identify non-point and point sources of pollution and understand the health of a watershed. Pollution prevention will be discussed so that the students may begin to take action

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Winter 2003 Programs at the Reserve

Friends of the DNERR
Jan. 22, Feb. 19

Preschool Naturalist
Jan. 23, Feb. 19

Kingston Upon Hull
Feb. 1

Young Environmentalists
Jan. 29, Feb. 26

Winter Birds and Abondoned Nests
Feb. 15

For more information and registration call
(302) 739-3436

Staff Directory

RESERVE MANAGER:
Mark DelVecchio

RESEARCH COORDINATOR:
Bob Scarborough

EDUCATION COORDINATOR:
Katy Lamborn

CONSERVATIONIST:
Wes Conley

ESTUARINE EDUCATOR:
Kate Marvel

RESEARCH TECHNICIAN:
Mike Mensinger

INTERN:
Heather Hudson

Outreach, con't

themselves. The students will learn how pollution enters a watershed and what types of pollution are most harmful. Water tests will be conducted in the classroom explaining what dissolved oxygen is and how it affects the plants ad animals that live in the watershed. We will discuss salinity and teach them to use a refractometer. Nitrates will be included in the discussion also.

One of our most popular programs is all about the Atlantic Horseshoe Crab (Limulus Polyphemus). Children will learn about one of Delaware's oldest and most interesting creatures in this presentation. After an awesome video the naturalist will discuss the crab's anatomy, life history, and ecological and economic importance. We have specimens of their eggs and blood and molts to share. The reserve has a model crab but will bring the live specimens into the class when available (May and June). We have a special program for elementary classes with a read-aloud of "Harry the Horseshoe Crab" by Susan Tate.

Programs are available from September through May and must be scheduled between the hours of 9am - 3pm. Call Estuarine Educator, Kate Marvel for more information at (302) 739-3436.

Katy Lamborn

Meet the Reserves

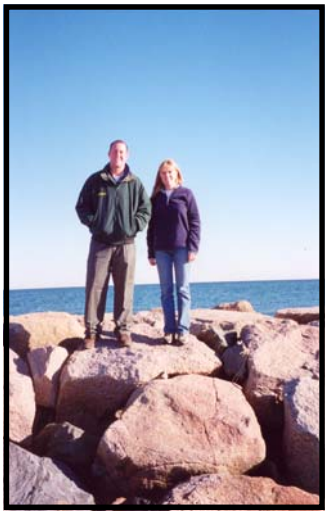
Waquoit Bay National Estuarine Research Reserve in Massachusetts

Mike Mensinger and Katy Lamborn traveled to Massachusetts October 20th through the 24th for the Annual National Estuarine Research Reserves meeting hosted this year by the Waquoit Bay National Estuarine Research Reserve. The WBNERR, designated in 1988, is managed at the state level by the Massachusetts Department of Environmental Management, Division of Forests and Parks. The WBNERR also has a very active friends group, Citizens for the Protection of Waquoit Bay, more than 100 volunteers aid the reserve in its mission of coastal stewardship, research and education.

Waquoit Bay NERR is located on the south shore of Cape Cod in the towns of Falmouth and Mashpee.

Waquoit Bay Reserve encompasses some 3000 acres of open waters, barrier beaches, marshlands and uplands on the south shore of Cape Cod. Within the reserve boundaries are Washburn Island and South Cape Beach State Park. Washburn Island is one of the last undeveloped coastal properties on Cape Cod. The L-shaped island, with a barrier beach, oak and pine forests and coastal salt ponds, is a quiet refuge for animals as well as human visitors. South Cape Beach State Park is a beautiful swimming beach that is noted for surf casting during the annual Bluefish and Stripped Bass migrations.

Fragile dune systems provide Waquoit Bay Reserve with some protection against the dynamic shore that changes with the season as well as in response to coastal storms and hurricanes. The beaches serve as nesting grounds for the federally threatened Piping Plover and foraging grounds for the endangered Roseate Tern.



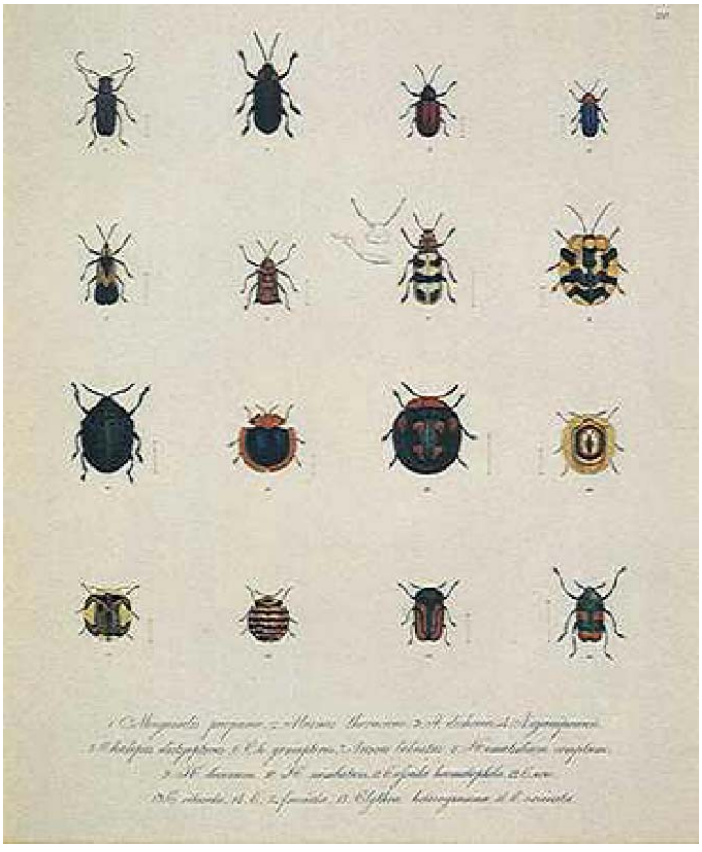
Mike & Katy at Waquoit Bay NERR

CONTINUED ON PAGE 5

The DNERR Catches the Collecting Bug

Have you ever wondered about the six-legged creature that stealthily zipped past as you hiked the nature trail? How about the buzzing beauty that landed for a few fleeting moments on the boardwalk railing as you admired fiddler crabs from afar? Insect aficionados will be pleased to hear the Reserve is gearing up for an intriguing new insect related project! The purpose of this collection is to provide a valuable research and educational tool to visitors of the St. Jones Reserve. I will utilize my entomological background to assemble and manage the comprehensive collection in proper scientific style. The collection will be useful to insect lovers of all ages and knowledge levels. Younger entomologists may marvel at the beautiful colors, curious configurations, and tongue twisting names of local insects. More advanced viewers may appreciate the Ordinal and Family level classification of all specimens.

The design of the collection will demonstrate the proper preparation of a wide range of insects. A strict set of rules is observed in the scientific community regarding the pinning or alcohol preservation of insect specimens. For example, beetles are always pinned on the upper right margin of the right elytra (hard outer wing). Did you know butterflies have a strict protocol as well? Wing spreading, a term used to describe the mounting of the insect and its wings to a special drying board, requires meticulous wing positioning for scientifically correct preservation. Visitors will be able to see the results of these techniques up close and personal.



The creation of a comprehensive insect collection requires a plethora of insect sampling. Tools like the sweep net, a thick meshed net, capture species commonly found in grassy fields and shrubs. A handheld suction device called an aspirator is used to acquire small specimens on plants, ground debris, etc. While the previously mentioned tools require an active collector, less time consuming acquisition methods do exist. Mason jars will be cleverly transformed into pitfall traps. As insects maneuver along the ground, they fall into the preservation fluid filled jar. The jars are examined and specimens are collected over short time intervals. A small addition of soap to the preservation fluid breaks the surface tension and prevents specimens from escaping. Pitfall traps are ideal for collecting nocturnal and diurnal ground dwelling insects.

A blacklight trap will assist in attracting many nocturnal specimens. This collecting method involves the set up of a blacklight near a large white sheet. Insects are attracted to the glowing light and are carefully removed from the sheet. While a myriad of other collecting procedures exist, the above are the four primary methods in use for the Reserve's collection.

While the collection is still in its infancy as of this writing, it will continue to grow exponentially. Most collecting takes place primarily in the spring through fall leaving identification and organizational work for the winter months. Since the goal is to provide a fairly comprehensive assemblage, new additions will constantly be added over time. This will keep the collection fresh and exciting. So, next time you are meandering through the nature trail, pay keen attention to the "smaller" members of the environment. You never know what you might miss in the mystical entomological world below right below your nose!

Mike Mensinger

A Page from the Naturalist's Notebook

FWS Employee tagging Loggerhead Turtle
Photo courtesy of USFish & Wildlife Service,

Sea turtles are among the largest living reptiles and have existed for thousands of years. The species of sea turtles most often seen in Delaware Bay, or washed ashore along bay beaches is the Loggerhead Sea Turtle (*Caretta caretta*). The Loggerhead Sea Turtle (*Caretta caretta*) was listed as a threatened species on July 28, 1978 – their populations declining due to coastal habitat loss, exploitation, and incidental capture from shrimp fishermen.

General Description:

Loggerheads are a large turtle with a characteristic large chunky head with powerful jaws and long flippers. Its carapace color is reddish brown to brown, averaging 30-45 inches long and weighing between 170 – 500 lbs. Hatchlings are dull brown in color and on average are 45 mm long and weigh 20 grams.

Distribution:

Loggerhead Sea Turtles can be found along the coasts, open sea, bays and estuaries in temperate, subtropical and tropical waters of the Pacific, Indian and Atlantic Oceans. They spend the majority of their time in the pelagic zone and in the Atlantic Ocean can be found from Newfoundland to Argentina and nest primarily in Florida, Georgia and the Carolinas.

Life History:

Loggerhead Sea Turtles spend almost their lives at sea swimming gracefully through the coastal and oceanic waters feeding upon clams, crabs, shrimp, urchins, horseshoe crabs, squid, jellyfish, sponges and aquatic plants. Little is known as to where the turtles go or what they do from the time they hatch until they return to the beaches to breed. We do know that they can easily live up to 50 years or more but do not reach maturity until they are 16-40 years old. Loggerheads mate offshore in late March through early June with the females returning to shore at night during spring and summer where they nest on sandy beaches during the flood of a spring tide. They lay their eggs (100-120 eggs) in a shallow nest that they dig with their snout and then cover using their hind flippers. Females usually return to nest every other year with three to four nests per season. Incubation of the eggs lasts for 31-65 days depending upon the temperature. The eggs hatch and emerge from the nest mostly at night and around the same time. Once they appear at the surface of the nest they move quickly towards to surf and out to sea.

Loggerhead Sea Turtle photo courtesy of NOAA.

Kim Cole,
Environmental Scientist,
Delaware Coastal Programs

Loggerhead Sea Turtle photo courtesy of NOAA.

Meet the Reserves Con't

Waquoit Bay Reserve, Waquoit, Massachusetts

Research at Waquoit Bay Reserve focuses on a variety of issues that are important to the Cape Cod area. Particular attention is paid to nonpoint source pollution as population growth along the coast has increased the amount of nitrogen entering coastal waters. To address this issue as well as many others, reserve scientists collaborate with many outside biologists, chemists, geologists and hydrologists from a variety of institutions, including the Marine Biological Laboratory and the Woods Hole Oceanographic Institution.

Reserve staff translate research to coastal decision-makers through a variety of means. Coastal Decision-maker Workshops are conducted for resource managers, municipal offices, citizen water quality monitors and many other groups, such as landscape professionals and real estate agents. Community courses are offered on topics ranging from groundwater dynamics to green home practices and ecological gardening techniques. Reserve staff work with local schools through teacher training and consulting to implement curriculum on coastal topics. Science and policy bulletins, newsletters, pamphlets and other publications are available.

For More Information:
Waquoit Bay National Estuarine Research Reserve
Massachusetts Department of Environmental Management
P.O. Box 3092
Waquoit, MA 02536
508-457-0495 phone
617-727-5537 fax
www.waquoitbayreserve.org
or http://www.ocrm.nos.noaa.gov/nerr/reserves/nerrwaquoitbay.html

Katy Lamborn

Wildlife and Outdoor Photography Class

The St. Jones Reserve hosted guest professor Dr. Richard Weber on November 6, December 4, 11, and 18 for a Wildlife and Outdoor Photography Class. Twenty students participated in this FREE class sponsored by the Reserve's Education Program. The only items required for the classes were a 35-millimeter camera and an enthusiasm for learning. Each participant received a workshop manual and six rolls of slide film to use for their "homework." Classes began with a slide presentation of Dr. Weber's own photography highlighting topics such as basic photography, composition, and exposure lighting with plenty of time for a little Q & A. The second half of the class allowed students to show 5 slides from each roll of film that they took prior to that evening's class, highlighting lessons learned in previous classes. The final class dipped into the far more technical aspects of close up photography. Dr. Weber provided excellent trouble shooting advice, his outdoor "expertise", and humorous commentary throughout. Some very nice work came out of the time and energy spent by sometimes complete amateurs and there was much interest in continuing with other classes, perhaps when the weather is a bit warmer. If this is something that might interest you, please call the Reserve so that we may schedule another class. Many thanks to Dr. Weber, a true "friend" of the Reserve!

Katy Lamborn

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Calling All Photographers!

2nd Annual Wetland Photography Contest - -
The Environmental Protection Agency's Wetlands Division is sponsoring a wetland photography contest focusing on images that show the wildlife of wetlands, specifically birds, mammals, amphibians, reptiles, insects, and crustaceans. We are looking for high quality images that capture the biodiversity, and beauty, of wetlands in different regions of the United States and at different seasons of the year. The winning photographs will be used to produce a 2004 wetlands calendar and will be prominently displayed on our website and at the National Wetland Awards ceremony in Washington, DC in May 2003.

The deadline for submission is March 1, 2003. For more information and details on how to submit your photographs please go to www.epa.gov/owow/wetlands/photocontest2003.html.

If you have any questions or need additional information about the contest please call 1-800-832-7828 and ask for wetland photo contest. To view the winning photographs of the 2002 wetland photography contest visit our website at www.epa.gov/owow/wetlands/photocontest2002.html.

Many thanks to Kim Cole for passing along this announcement. Just a reminder that the Reserve is a beautiful place even during the supposed drab winter months. Just bring a camera!

Your Attention Pease!

Our mailing list has grown substantially over the last two years by collecting names at public events, the St. Jones Reserve Center, and by your inquiries about our programs. We are now updating our mailing list to improve the efficiency of our quarterly mailings. ***If your mailing address is in any way incorrect or if you would like to be removed from the mailing list, please call the St. Jones Reserve at (302) 739-3436 and leave your request at extension 10.***

Thank you.

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